

$\beta$ -strand A      loop AB       $\beta$ -strand B  
360 X D S N P R G V S A Y L S R P S P F D X L F I R K S P T I T  
(SEQ ID NO:1)      1,7      8

                 loop BC       $\beta$ -strand C      loop CD  
390 C L V V D L A P S K G T V N L T W S R X A S X X G K P V N H  
                 2      9      3

$\beta$ -strand D      loop DE       $\beta$ -strand E      loop EF  
420 S T R K E E K Q R X N X X G T L T V T S T L P V G T R D W I  
                 6      10      4

$\beta$ -strand F      loop FG       $\beta$ -strand G  
450 E G E T Y Q C R V T H P H L P R A L X M R S T T K T S G P  
11      FIG.1      5      12

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MaE11 Light Chain (SEQ ID NO:2)

DIVLTQSPASLAVSLGQRATISCKASQSVDDYDGSYMNWYQQKPGQPPILLIYAASYLG  
SEIPARFSGSGSGTDFTLNIHPVEEEDAATFYCQQSHEDPYTFGAGTKLEIK

MaE11 Heavy Chain (SEQ ID NO:3)

DVQLQESGPGLVKPSQSLSLACSVTGYSITSGYSWNWIRQFPGNKLEWMGSITYDGSS  
NYNPSLKNRISVTRDTSQNQFFLKLNSATAEDTATYYCARGSHYFGHWHFAVWGAGTTVT  
VSSAKTTPPSVYPLAR

Mae13 Light Chain (SEQ ID NO:4)

DIVMTQSQKFMSTSVGDRVSVTCKASQNVSSNVAWYQQKPGQSPKALIYSASYRYS  
PDRFTGSGSGTDFTLTISNVQSEDLAEYFCQQYYTYPLYTFGGGTKLEIKRADAAPTVSI  
FPPSTR

Mae13 Heavy Chain (SEQ ID NO:5)

DVQLQESGPGLVKPSQSLSLTCTVTGYTITSDNAWNWIRQFPGNKLEWMGYINHSGTT  
SYNPSLKSRIISITRDTSKNQFFLQLNSVTTEDTATYYCAWVAYAMDYWGQGTSVTVSSA  
KTTTPPSVYPLAR

Mae15 Light Chain (SEQ ID NO:6)

DIQLTQSPASLAVSLGQRATISCKASQSVDDYDGSYMNWYQQKPGQPPKLLIYAASNLES  
GIPARFSGSGSGTDFTLNIHPVEEEDAATYYCQQSNEDPFTFGAGT

Mae15 Heavy Chain (SEQ ID NO:7)

DVQHQESEPDLVKPSQSLSLTCTVTGYTITSGYNRHWIRQFPGNKLEWMGYIHYSGST  
NYNPSLKRRIISITRDTSKNQFFLQLNSVTTEDTATYYCARGSIYYYGSRYRYFDVWGAGT  
TVTVSSAKRHPHLSIHWP

FIG.2

## Humanized MaE11 Version 1 (intact IgG)

## Heavy Chain (SEQ ID NO:8)

EVQLVESGGGLVQPGGSLRLSCAVSGYSITSGYSWNWIRQAPGKGLEWVASITYDGSTNY  
ADSVKGRFTISRDDSKNTFYLMNSLR AEDTAVYYCARGSHYFGHWHFAVWGQGT LVTVS  
SASTKGKGPSVFP LAPSSKSTSGGTAALGCLVKDYFPEPVT VSWNSGALTSGVHTFPAVL  
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPEL  
LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE  
QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS  
REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDK  
SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

## Light Chain (SEQ ID NO:9)

DIQLTQSPSSLSASVGDRVTITCRASQSVDYDGDSYMNWYQQKPGKAPKLLIYAASYLES  
GVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSHEDPYTFGQGTKVEIKRTVAAPSVF  
IFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSSTYSLS  
STLTLSKADYEKKHKVYACEVTHQGLSSPVTKSFNRGEC

FIG.3

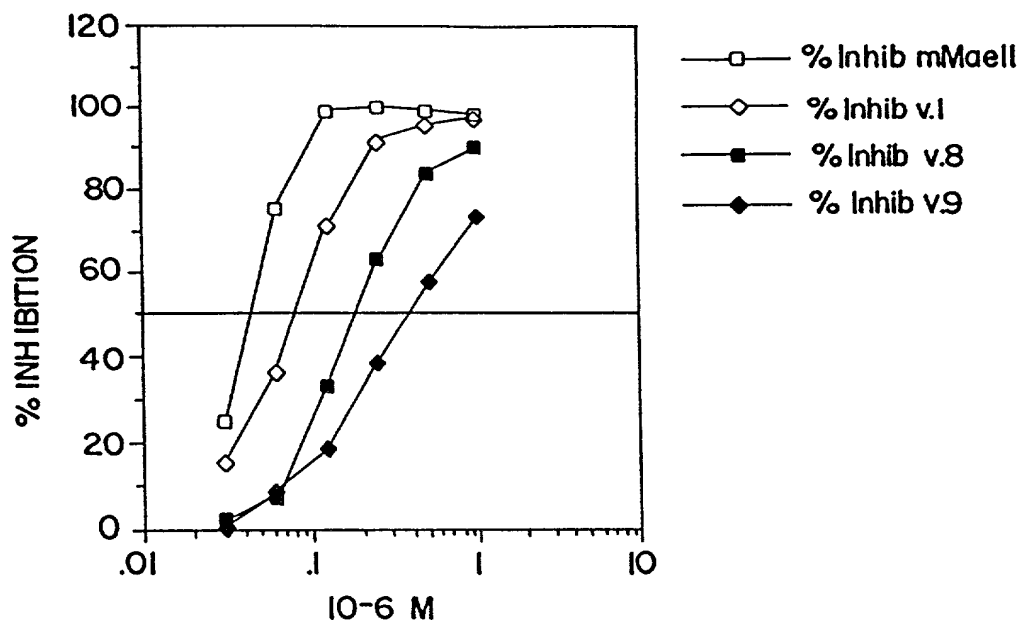


FIG.4a

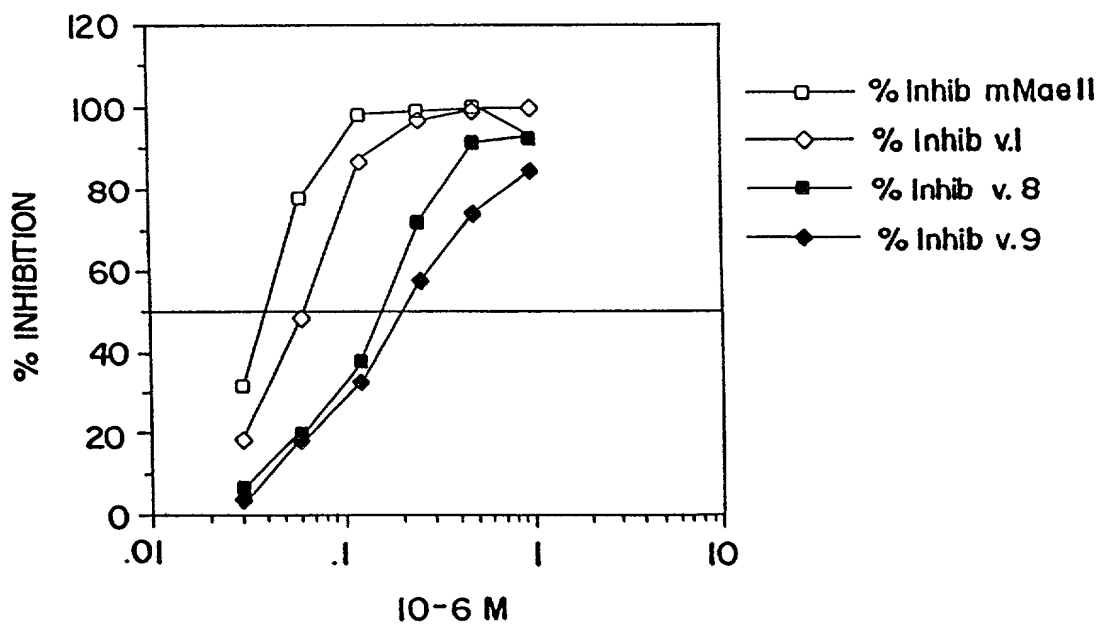


FIG.4b

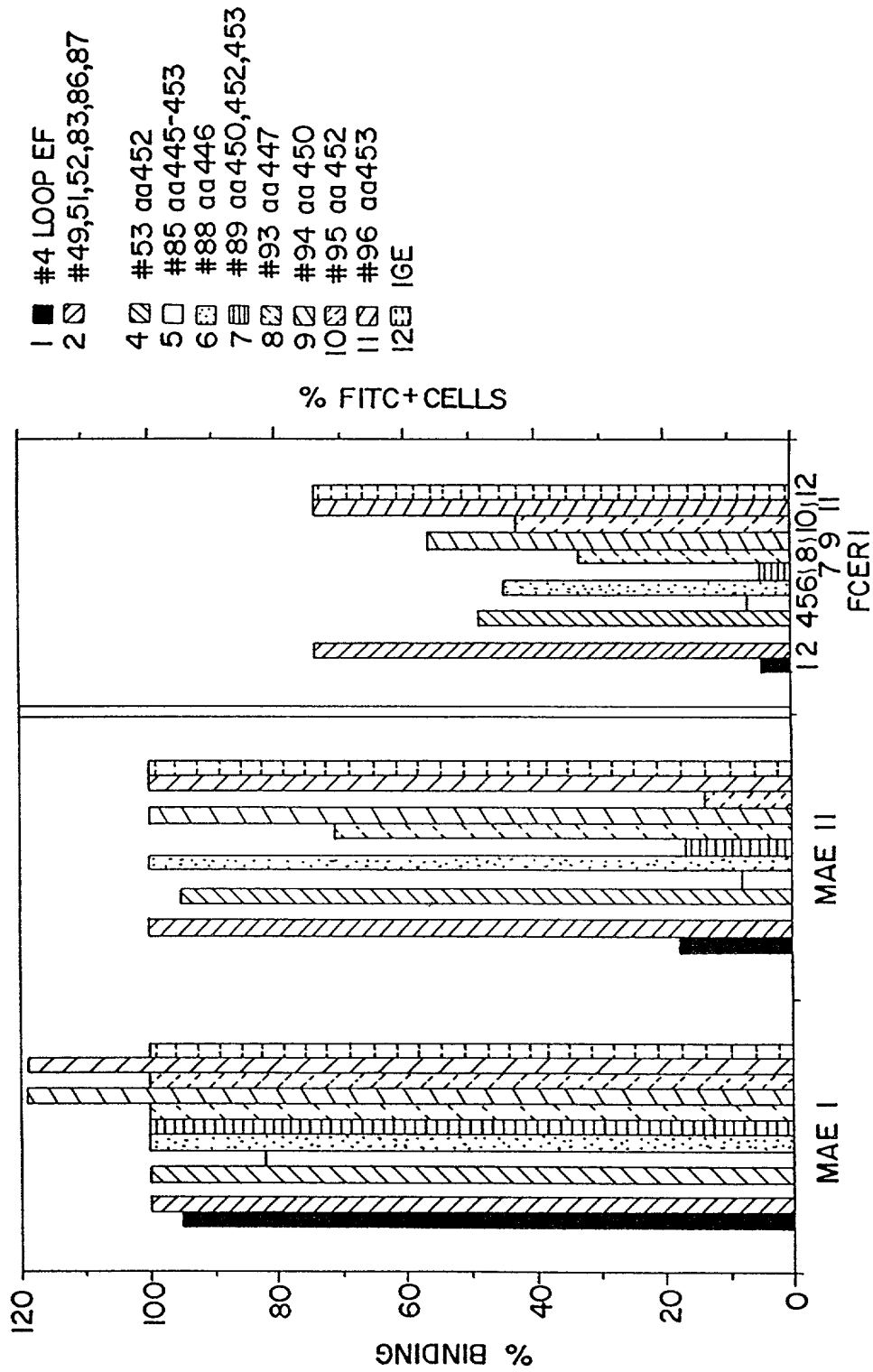
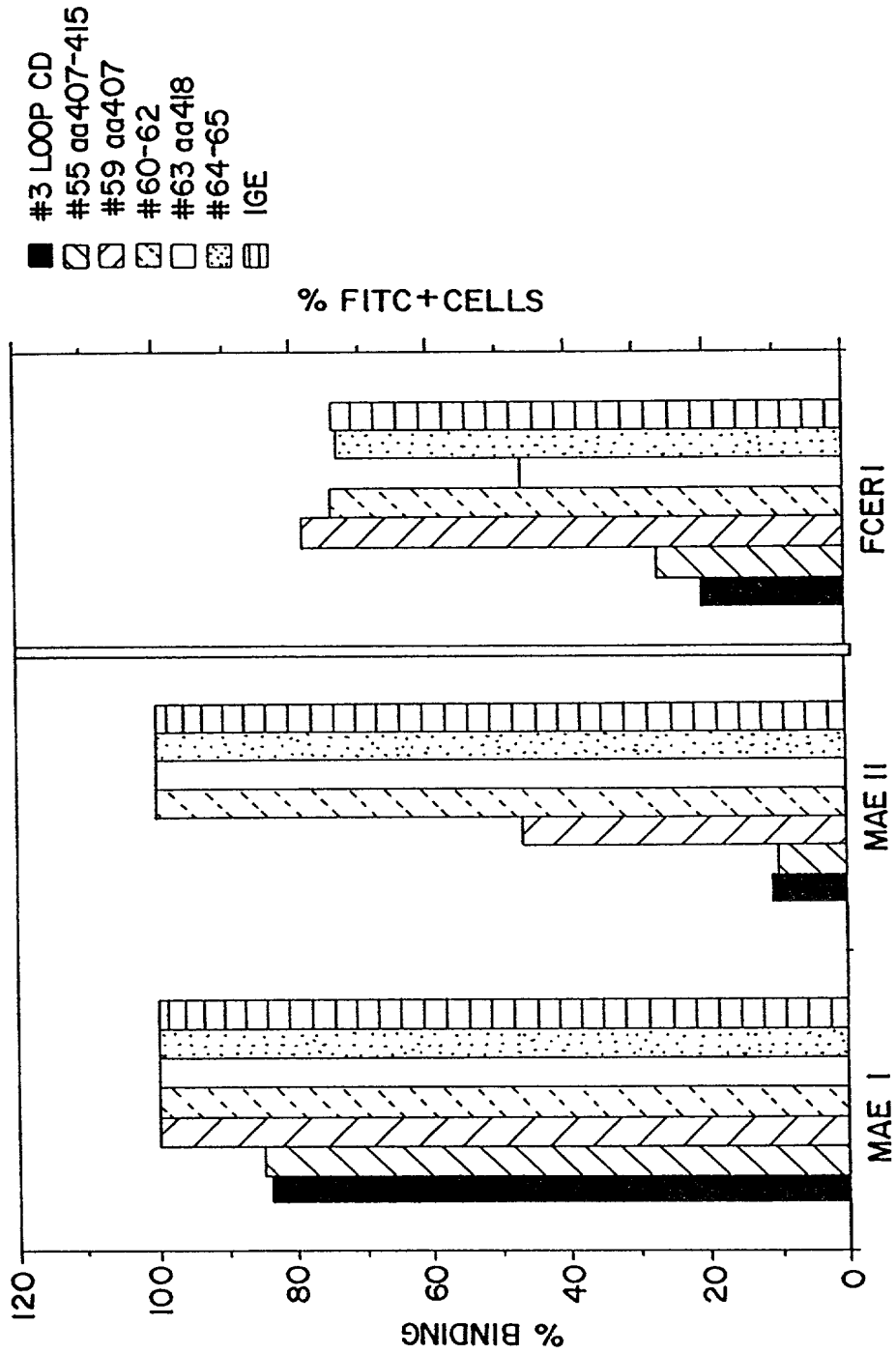


FIG.5a



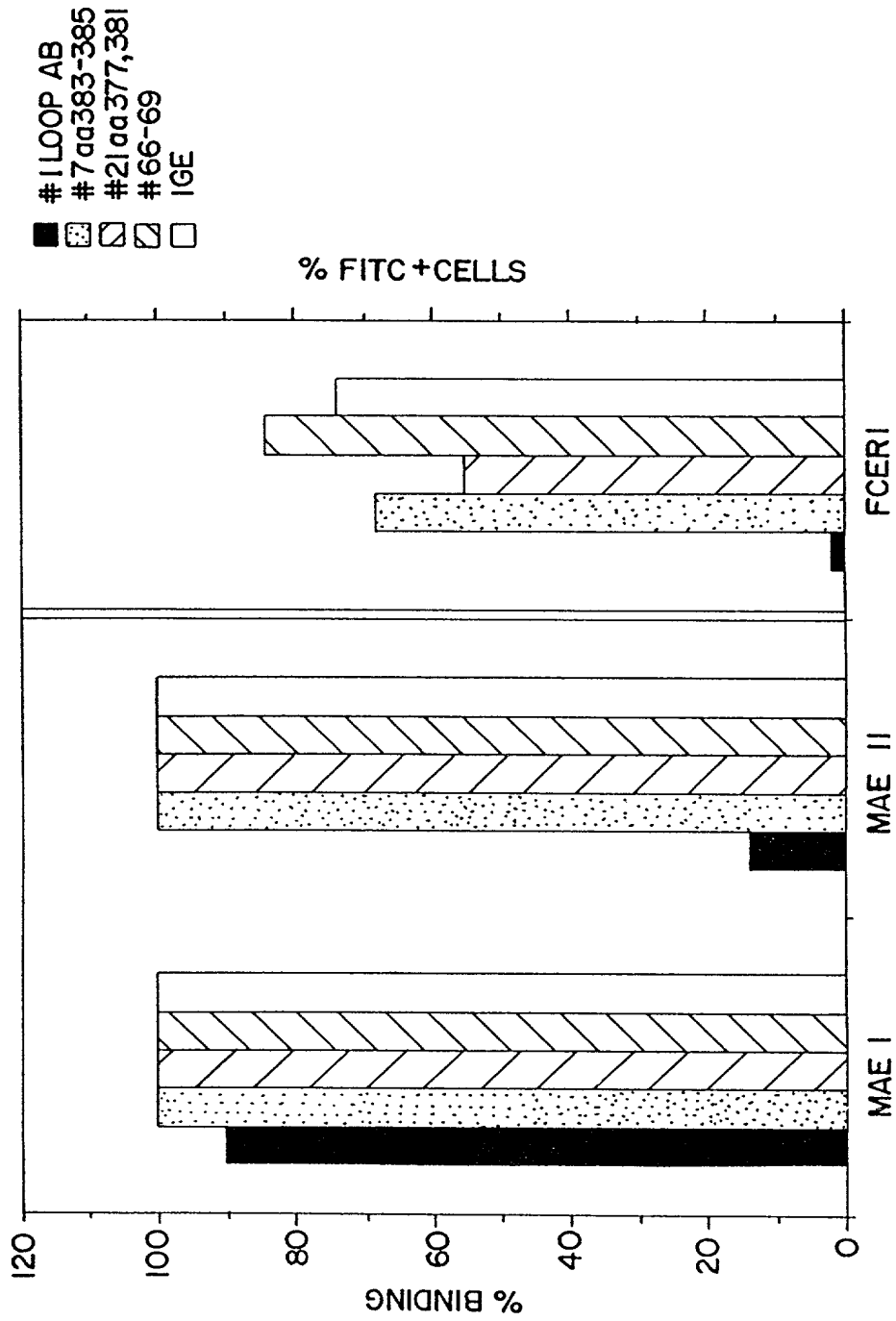


FIG.5c